

REMARKS

Present Status of the Application

The Office Action mailed on September 11, 2003 rejected all pending claims 1-8. Specifically, claims 1-8 were rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Daimon et al. (US 4,752,526) or Yasukawa et al. (US 5,145,891). Applicant has amended independent claim 1 and canceled claims 2, 4, 6 and 8. Reconsideration of claims 1, 3, 5 and 7 is respectfully requested.

Summary of the Invention

This invention is directed to an organic fiber filler-containing polypropylene resin composition. The polypropylene resin composition essentially contains an olefin polymer composition (A) that comprises (a) 0.01 to 5.0 parts by weight of ethylene-based polymer which has an intrinsic viscosity of 15 to 100 dl/g and (b) 100 parts by weight of propylene-based polymer which has an intrinsic viscosity of 0.2 to 10 dl/g. The polypropylene resin satisfies Equation (1) ($\log MT > 4.24 \times \log [\eta] - 1.2$) as recited in claim 1.

Discussion of Office Action Rejections under 35 U.S.C. 102(b)

Claims 1-8 were rejected under 35 U.S.C. 102(b) as being anticipated by Daimon et al. or Yasukawa et al. Please note that Applicant has amended independent claim 1 by incorporating original claim 2 into it and has canceled claims 2, 4, 6 and 8.

As mentioned above, one feature of this invention is the inclusion of the olefin polymer composition (A) that comprises (a) 0.01 to 5.0 parts by weight of ethylene-based polymer which

has an intrinsic viscosity of 15 to 100 dl/g and (b) 100 parts by weight of propylene-based polymer which has an intrinsic viscosity of 0.2 to 10 dl/g. The feature is recited in amended independent claim 1 as follows, marked by underlines.

1. An organic fiber filler-containing polypropylene resin composition comprising a polypropylene resin satisfying the following equation and an organic fiber filler in a proportion of 1 to 250 parts by weight of the filler per 100 parts by weight of the resin composition:

$$\log MT > 4.24 \times \log [\eta] - 1.2 \quad (1)$$

wherein MT represents a melt tension (unit: cN) of the polypropylene resin at 230°C, and $[\eta]$ represents an intrinsic viscosity (unit: dl/g) of the polypropylene resin measured in tetralin at 135°C; and

the polypropylene resin is an olefin polymer composition (A) described below or a mixture comprising the above olefin polymer composition (A) and a polypropylene base resin (B) described below, and a mixing proportion of the above polypropylene base resin (B) is 90% by weight or less based on the mixture:

the olefin polymer composition (A): an olefin polymer composition comprising (a) and (b) described below:

(a) 0.01 to 5.0 parts by weight of polyethylene which is an ethylene homopolymer or an ethylene-olefin copolymer having an ethylene polymer unit of 50% by weight or more and which has an intrinsic viscosity $[\eta_E]$ falling in a range of 15 to 100 dl/g measured in tetralin at 135°C, and

(b) 100 parts by weight of polyethylene which comprises a propylene homopolymer or a propylene-olefin copolymer having a propylene polymer unit of 50% by weight or more and which has an intrinsic viscosity $[\eta_P]$ of 0.2 to 10 dl/g measured in tetralin at 135°C; and

the polypropylene base resin (B): a propylene homopolymer or a propylene/ α -olefin copolymer comprising propylene as a principal component.

The polypropylene resin satisfies Equation (1) ($\log MT > 4.24 \times \log [\eta] - 1.2$), as described in page 6, lines 8-21 of the specification. With the above features, the resin composition of the present invention is excellent in moldability without causing tearing-off in a melting state in extrusion molding and makes it possible to provide a good molded article having a high mechanical strength even in foam molding, as described in page 16, lines 14-20 of the specification.

Daimon fails to teach or suggest the aforementioned feature of claim 1. Daimon discloses

a metal-polypropylene laminate composite that contains crystalline polypropylene as a raw material, but does not disclose a polyethylene (a) which is an ethylene homopolymer or an ethylene-olefin copolymer having an ethylene polymer unit of 50% by weight or more and which has an intrinsic viscosity $[\eta_E]$ falling in a range of 15 to 100 dl/g measured in tetralin at 135°C and a polyethylene (b) which comprises a propylene homopolymer or a propylene-olefin copolymer having a propylene polymer unit of 50% by weight or more and which has an intrinsic viscosity $[\eta_P]$ of 0.2 to 10 dl/g measured in tetralin at 135°C as specified in claim 1. As described in col. 2, lines 35-38 of Daimon, the polypropylene resin used in Daimon is a *crystalline polypropylene modified with an unsaturated carboxylic acid or its derivative*. Obviously, the crystalline polypropylene used in Daimon is obviously different from the olefin polymer composition (A) of claim 1 that comprises the ethylene-based polymer (a) and the propylene-based polymer (b).

Throughout his patent, Daimon never teaches or suggests using, in his polypropylene composition, an ethylene homopolymer or an ethylene-olefin copolymer having an ethylene polymer unit of 50% by weight or more, let alone the specific proportions of (a) and (b) as specified in claim 1. On col. 3, lines 10-19, Daimon discloses that propylene-ethylene copolymers and propylene-ethylene-butene-1 copolymers can be used in his polypropylene composition, but he specifically requires that, in these copolymers, the amount of the propylene component be at least 70 wt. %.

Yasukawa also fails to teach or suggest the aforementioned feature of claim 1. Yasukawa fails to teach or suggest a polyethylene (a) which is an ethylene homopolymer or an ethylene-olefin copolymer having an ethylene polymer unit of 50% by weight or more and which

has an intrinsic viscosity $[\eta_E]$ falling in a range of 15 to 100 dl/g measured in tetralin at 135°C and a polyethylene (b) which comprises a propylene homopolymer or a propylene-olefin copolymer having a propylene polymer unit of 50% by weight or more and which has an intrinsic viscosity $[\eta_P]$ of 0.2 to 10 dl/g measured in tetralin at 135°C as specified in claim 1. As described in col. 2, lines 24-67 of Yasukawa, the polypropylene resin used in Yasukawa is a *propylene-ethylene block copolymer*, which is surely different from the olefin polymer composition (A) that is *a mixture of the ethylene-based polymer (a) and the propylene-based polymer (b)* having specific proportions and different intrinsic viscosities as specified in claim 1.

Throughout his patent, Yasukawa never teaches or suggests using, in his polypropylene composition, an ethylene homopolymer or an ethylene-olefin copolymer having an ethylene polymer unit of 50% by weight or more, let alone the specific proportions of (a) and (b) as specified in claim 1. On col. 2, lines 27-59, Yasukawa specifically requires that the propylene-ethylene block copolymer in his polypropylene composition have 3-16% by weight of ethylene content based on the entire copolymer.

For at least the reasons mentioned above, Applicant respectfully submits that amended independent claim 1 is not anticipated by the cited prior art.

For at least the same reasons mentioned above, Applicant respectfully submits that claims 3, 5 and 7 dependent from amended independent claim 1 are not anticipated either.

Discussion of Office Action Rejections under 35 U.S.C. 103(a)

As mentioned above, both the crystalline polypropylene used in Daimon and the propylene-ethylene block copolymer used in Yasukawa are obviously different from the olefin

polymer composition (A) in claim 1 that comprises an ethylene-based polymer (a) and a propylene-based polymer (b) having specific proportions and different intrinsic viscosities as specified in claim 1. Therefore, at least the above features of claim 1 cannot be obtained from Daimon, Yasukawa or the combination of the two.

For at least the reasons mentioned above, Applicant respectfully submits that amended independent claim 1 is not obvious over the cited prior art.

For at least the same reasons mentioned above, Applicant respectfully submits that claims 3, 5 and 7 dependent from amended independent claim 1 are not obvious over the cited prior art either.

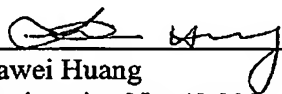
CONCLUSION

For at least the forgoing reasons, it is believed that pending claims 1, 3, 5 and 7 are in proper condition for allowance. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

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Respectfully submitted,
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